

List of Plants

C BETA-BOURBONENE

Chemid

BETABOURBONENE

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Plant Part	Low PPM	High PPM	StdDev	*Reference
Acinos alpinus	Shoot	--	20.0	-0.26	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of <i>Acinus alpinus</i> (L.) Moench ssp. <i>meridionalis</i> (Nyman). P.W. Ball Growing in Spain. Flav. & Fragr. J. 8:127-130.)
Acinos alpinus	Shoot	--	20.0	-0.26	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of <i>Acinus alpinus</i> (L.) Moench ssp. <i>meridionalis</i> (Nyman). P.W. Ball Growing in Spain. Flav. & Fragr. J. 8:127-130.)
Agastache rugosa	Shoot	--	--		Jim Duke's personal files.
Boswellia sacra	Resin, Exudate, Sap	--	10000.0		Chiavari, G., Galletti, G. C., Piccaglia, R., Mohamud, M. A. 1991. Differentiation Between Resins <i>Boswellia carterii</i> and <i>Boswellia frereana</i> (Frankincense) of Somali Origin. J. Essent. Oil Res. 3 (3):185-186.
Boswellia sacra	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Calamintha nepeta	Leaf	--	8.0	-0.52	Akgul, A., De Pooter, H.L., and De Buyck, L.F. 1991. The Essential Oils of <i>Calamintha nepeta</i> subsp. <i>glandulosa</i> and <i>Ziziphora clinopodioides</i> from Turkey. J. Ess. Oil Res., 3: 7-10.
Calamintha nepeta	Shoot	--	5.0	-0.39	Kirimer, N., Baser, K.H.C., Ozek, T. and Kurkcuoglu, M. 1992. Composition of the Essential Oil of <i>Calamintha nepeta</i> subsp. <i>glandulosa</i> . J. Ess. Oil Res. 4:189-190
Callicarpa americana	Leaf	--	3.0	-0.55	*
Chamaemelum nobile	Plant	--	--		*
Glechoma hederacea	Plant	1.0	6.0	-0.48	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hypericum perforatum	Plant	0.25	4.5	-0.49	*
Hyptis suaveolens	Shoot	--	15.0	-0.3	Mallavarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. J. Ess. Oil Res. 5: 321.
Hyptis suaveolens	Shoot	--	15.0	-0.3	Mallavarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. J. Ess. Oil Res. 5: 321.
Leonotis leonurus	Se	--	4.0		Pedro, L.G., Barroso, J.G., Marques, N.T., Ascensao, L., Pais, M.S.S. and Scheffer, J.J.C. 1991. Composition of the Essential Oil from Sepals of <i>Leonotis leonurus</i> R. Br. J. Ess. Oil Res. 3: 451-3
Lonicera japonica	Flower	0.001	0.062	-0.77	Schlotzhauer, W.S., S.D. Pair, and R.J. Horvat. 1996. Volatile constituents from the flowers of Japanese Honeysuckle. J. Agric. Food Chem. 44:206-209.
Lycopus virginicus	Plant	53.0	132.0	0.46	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Magnolia denudata	Bulb	--	--		*
Magnolia denudata	Twig	--	--		*
Magnolia denudata	Bark	--	--		*
Magnolia denudata	Flower	--	--		*
Melissa officinalis	Shoot	1.0	48.0	-0.01	Deutsche Apot. Zitt. 129(4):155-163. W. Schulze et al. Die Melisse.
Mentha spicata	Leaf	2.0	50.0	-0.26	*
Mentha pulegium	Plant	15.0	30.0	-0.3	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Mentha longifolia	Shoot	1.0	535.0	4.32	*
Mentha spicata	Essential Oil	--	--		*
Micromeria varia	Shoot	--	--		*
Micromeria varia	Shoot	--	--	-0.44	Pedro, L.G., et al. 1995. Composition of the Essential oil of <i>Micromeria varia</i> Benth. ssp. <i>thymoides</i> (Sol. ex Lowe) Perez var. <i>thymoides</i> , and endemic species of the Madeira Archipelago. flav. & Fragr. J.

Micromeria fruticosa	Shoot	--	10.0	-0.35	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of <i>Micromeria fruticosa</i> (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
Micromeria congesta	Leaf	45.0	55.0	-0.23	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
Micromeria myrtifolia	Shoot	--	0.1	-0.44	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of <i>Micromeria myrtifolia</i> Boiss. et Hohen. J. Ess. Oil Res., 4: 79-80.
Micromeria fruticosa	Shoot	--	10.0	-0.35	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of <i>Micromeria fruticosa</i> (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
Monarda didyma	Plant	5.0	70.0	-0.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Monarda didyma	Leaf	50.0	90.0	-0.01	*
Monarda didyma	Flower	--	10.0	-0.58	Flavour and Fragrance Journal, 6: 80.
Monarda fistulosa	Plant	1.0	62.0	-0.06	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Myroxylon balsamum	Plant	--	--		*
Nepeta racemosa	Shoot	--	50.0	0.01	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7.
Nepeta racemosa	Shoot	--	50.0	0.01	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7.
Ocimum basilicum	Plant	--	--		*
Ocimum gratissimum	Leaf	40.0	70.0	-0.13	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of <i>Ocimum gratissimum</i> L. J. Ess. Oil Res. 4: 231-234.
Ocimum basilicum	Shoot Essent. Oil	--	3800.0	-1.18	*
Ocimum gratissimum	Flower	95.0	145.0	1.95	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of <i>Ocimum gratissimum</i> L. J. Ess. Oil Res. 4: 231-234.
Origanum vulgare	Plant	--	9.0	-0.46	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Origanum vulgare	Plant	--	2.0	-0.51	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Origanum vulgare	Shoot Essent. Oil	--	7500.0	-0.08	*
Origanum vulgare	Plant	--	8.0	-0.46	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Panax ginseng	Shoot	--	--		*
Panax ginseng	Flower Essent. Oil	--	--		*
Pelargonium citrosum	Shoot	--	1.0	-0.43	Matsuda, B. M., et al. 1996. Essential Oil Analysis and Field Evaluation of the Citrosa Plant 'Pelargonium citrosum' as a Repellent Against Populations of <i>Aedes</i> Mosquitoes. J. Am. Mosq. Contr. Assoc. 12(1):69-74.
Pelargonium graveolens	Essential Oil	--	--		*
Perilla frutescens	Shoot Essent. Oil	--	12000.0	1.26	Nguyen, X. D., La, D. M., Lu'u, D. C., Leclercq, P. A. 1995. Essential Oil Constituents from the Aerial Parts of <i>Perilla frutescens</i> (L.) Britton. J. Essent. Oil Res., 7(4): 429-432.
Pycnanthemum tenuifolium	Shoot	16.0	400.0	3.12	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum montanum	Shoot	91.0	104.0	0.49	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum pilosum	Leaf	10.0	35.0	-0.35	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum albescens	Shoot	16.0	54.0	0.04	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum virginianum	Shoot	6.0	232.0	1.63	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum pilosum	Flower	10.0	35.0	-0.11	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia officinalis	Leaf Essent. Oil	--	--		*
Salvia gilliesii	Shoot	--	44.0	-0.05	Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. J. Ess. Oil Res. 5: 319-320.

<i>Satureja cilicica</i>	Shoot	--	2.0	-0.42	Tumen, G. Baser, K.H.C. and Kirimer, N. 1993. The Essential Oil of <i>Satureja cilicica</i> P.H. Davis. <i>J. Ess. Oil Res.</i> 5: 547-548.
<i>Satureja montana</i>	Plant	4.0	85.0	0.11	*
<i>Sideritis pauli</i>	Shoot	--	10.0	-0.35	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of <i>Sideritis pauli</i> Pau. <i>FFJ7</i> : 47-8. 1992.
<i>Sideritis germanicolpitana</i>	Plant	6.0	9.0	-0.46	<i>J. Essential Oil</i> , 4: 533.
<i>Sideritis mugronensis</i>	Leaf	15.0	25.0	-0.41	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. <i>J. Ess. Oil Res.</i> , 3: 395-397.
<i>Sideritis athoa</i>	Shoot	--	4.0	-0.4	Ozek, T., Baser, K.H.C. and Tumen, G. 1993. The Essential Oil of <i>Sideritis athoa</i> Papanikolaou Et Kokkini. <i>J. Ess. Oil Res.</i> 5: 669-670.
<i>Sideritis mugronensis</i>	Flower	10.0	15.0	-0.49	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. <i>J. Ess. Oil Res.</i> , 3: 395-397.
<i>Stevia rebaudiana</i>	Flower	--	--		Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. <i>Stevia. The genus Stevia</i> . Taylor & Francis. New York, NY. 211 pp.
<i>Stevia rebaudiana</i>	Leaf	--	--		Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. <i>Stevia. The genus Stevia</i> . Taylor & Francis. New York, NY. 211 pp.
<i>Syzygium aromaticum</i>	Leaf	--	--		Charalambous, G. (Ed.) 1994. <i>Spices, Herbs and Edible Fungi</i> . Elsevier Science B. V. Amsterdam. 764 pp.
<i>Teucrium oxylepis</i>	Shoot	--	2.92	-0.41	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium pseudoscorodonia</i>	Shoot	--	2.45	-0.42	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium divaricatum</i>	Leaf	--	90.0	-0.01	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
<i>Teucrium oxylepis</i>	Shoot	--	0.34	-0.43	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium micropodioides</i>	Leaf	--	20.0	-0.44	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
<i>Teucrium cyprium</i>	Leaf	--	105.0	0.08	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
<i>Teucrium scorodonia</i>	Shoot	--	4.88	-0.39	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium salviastrum</i>	Shoot	--	1.56	-0.42	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium kotschyanum</i>	Leaf	--	640.0	3.39	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
<i>Teucrium asiaticum</i>	Shoot	--	0.87	-0.43	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Thymus funkii</i>	Shoot	--	8.0	-0.37	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of <i>Thymus funkii</i> Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.
<i>Thymus longicaulis</i>	Shoot	--	--	-0.44	Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5.
<i>Thymus riatarum</i>	Shoot	--	0.1	-0.44	Iglesias, J., Vila, R., Canigueral, S., Bellakdhar, and II Idrissi, A. 1991. Analysis of the Essential Oil of <i>Thymus riatarum</i> . <i>J. Ess. Oil Res.</i> 3: 43-4.
<i>Thymus funkii</i>	Shoot	--	8.0	-0.37	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of <i>Thymus funkii</i> Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.
<i>Thymus longicaulis</i>	Shoot	--	9.0	-0.36	Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5.
<i>Thymus cilicicus</i>	Shoot	--	47.0	-0.02	Tumen, G., Koyuncu, M., Kirimer, N., and Baser, K.H.C. 1994. Composition of the Essential Oil of <i>Thymus cilicicus</i> Boiss. & Bal. <i>J. Ess. Oil Res.</i> 6: 97-8.
<i>Thymus masticina</i>	Plant	--	10.0	-0.45	Lawrence, B.M., <i>Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980</i> .
<i>Thymus x citriodorus</i>	Plant	--	20.0	-0.37	Stahl-Biskup, E. and Holthuijzen, J. 1995. Essential oil and glycosidally bound volatiles of lemon-scented thyme, <i>Thymus x citriodorus</i> (Pers.) Schreb. <i>Flav. & Fragr. J.</i> 10: 225-229.
<i>Thymus longicaulis</i>	Shoot	--	9.0	-0.36	Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5.
<i>Vitex agnus-castus</i>	Leaf	--	0.2	-0.57	Ekundayo, O., Laakso, I., Holopainen, M., Hiltunen, R., Oguntiemein, B., and Kauppinen, V. 1990. The Chemical Composition and Antimicrobial Activity of the Leaf Oil of <i>Vitex agnus-castus</i> L. <i>J. Essential Oil Research</i> , 2: 115-119.